

χ_{c2} transition form factors

Saturday 20 July 2024 11:30 (15 minutes)

We will discuss the light-front formulation of quarkonium $\gamma^*\gamma$ transition form factors for $J^{PC} = 2^{++}$ meson states. We will present $\gamma^*\gamma \rightarrow \chi_{c2}$ transition amplitudes and the pertinent helicity form factors. We show the results for the two-photon decay width of χ_{c2} as well as three independent $\gamma^*\gamma$ transition form factors of χ_{c2} as a function of photon virtuality Q^2 . We compare our results for the two-photon decay width to the recently measured ones by the Belle-2 and BES III collaborations. Our approach explains the value of $\Gamma(\chi_{c2})/\Gamma(\chi_{c0})$ measured experimentally. We also present the off-shell widths as a function of photon virtuality and compare them to the Belle data.

I.Babiarz, R.Pasechnik, W.Schafer and A.Szczurek, χ_{c2} tensor meson transition form factors, work in progress I.B., {it et al.}, JHEP 06 (2020) 101, doi:10.1007/JHEP06(2020)101

Alternate track

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Primary authors: SZCZUREK, Antoni; BABIARZ, Izabela; SCHAEFER, Wolfgang

Presenter: BABIARZ, Izabela

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